CLAIMS

1. A chemically strengthened microcrystalline glass, wherein the chemically strengthened microcrystalline glass contains a lithium disilicate crystalline phase and the lithium disilicate crystalline phase has a larger mass percentage than other crystalline phases existing in the chemically strengthened microcrystalline glass, wherein a mass of the lithium disilicate crystalline phase accounts for more than 70% of all crystalline phases of the chemically strengthened microcrystalline glass; the chemically strengthened microcrystalline glass has a compression stress layer on a surface and tensile stress layer inside; and the chemically strengthened microcrystalline glass satisfies:

N=n*(CT_LD-50000)/10000, -32.5<N<15, wherein N is an index related to mechanical strength and weather resistance,

n = (a mass percentage of Na_2O on the surface of the chemically strengthened microcrystalline glass / a mass percentage of K_2O on the surface of the chemically strengthened microcrystalline glass)^2; the mass percentage of Na_2O on the surface of the chemically strengthened microcrystalline glass and the mass percentage of K_2O on the surface of the chemically strengthened microcrystalline glass are determined by XRF; and; CT_LD represents a tensile stress line density, wherein a unit is MPa/mm;

$$CT_LD = |CT_AV| \times \frac{(1000 \times t - 2 \times DOL_0)}{t}$$

, wherein

t is a thickness of the chemically strengthened microcrystalline glass, with a unit of mm; DOL_0 is a depth of the compression stress layer of the chemically strengthened microcrystalline glass, with a unit of μm; and |CT_AV| is an absolute value of an average tensile stress of the chemically strengthened microcrystalline glass, with a unit of MPa, and in the Formula N, data is substituted for calculation according to above requirements of units, and a calculated result is obtained without comprising the units themselves in the calculation,

wherein as measured by XRF and calculated in terms of an oxide mass percentage, the mass percentage of Na_2O on the surface of the chemically strengthened microcrystalline glass is 5%-8.5%.

2. The chemically strengthened microcrystalline glass according to claim 1, wherein -28.0≤N≤0.

3. The chemically strengthened microcrystalline glass according to claim 1, wherein the chemically strengthened microcrystalline glass satisfies: 45000MPa/mm≤CT_LD≤52000MPa/mm.

4. The chemically strengthened microcrystalline glass according to claim 1, wherein as measured by XRF and calculated in terms of an oxide mass percentage, the mass percentage of K_2O on the surface of the chemically strengthened microcrystalline glass is 0.7%-2.0%; and/or,

in terms of an oxide mass percentage, in a composition at a center of the chemically strengthened microcrystalline glass, the mass percentage of Na_2O is 3%-3.5%.

5. The chemically strengthened microcrystalline glass according to claim 4, wherein as measured by XRF and calculated in terms of an oxide mass percentage, the mass percentage of Na_2O on the surface of the chemically strengthened microcrystalline glass is 5.5%-7.5%; and/or

as measured by XRF and calculated in terms of an oxide mass percentage, the mass percentage of K_2O on the surface of the chemically strengthened microcrystalline glass is 0.7%-1.5%; and/or,

in terms of an oxide mass percentage, in a composition at a center of the chemically strengthened microcrystalline glass, the mass percentage of Na_2O is 3.1%-3.2%.

6. The chemically strengthened microcrystalline glass according to claim 1, wherein the chemically strengthened microcrystalline glass satisfies:

$Y=\Delta C\times((CT_LD-50000)/100)^2$, $Y<60$, wherein Y is an index related to stress,

ΔC represents a difference between the mass percentage of Na_2O on the surface of the chemically strengthened microcrystalline glass and a mass percentage of Na_2O at a center of the chemically strengthened microcrystalline glass, with the mass percentage of Na_2O on the surface of the chemically strengthened microcrystalline glass being measured by XRF; CT_LD represents the tensile stress line density, and the unit is MPa/mm; in the Formula Y, data is substituted for calculation according to the above requirements of units, and a calculated result is obtained without comprising the units themselves in the calculation.

7. The chemically strengthened microcrystalline glass according to claim 1, wherein the chemically strengthened microcrystalline glass satisfies:

75MPa≤|CT_AV|≤120MPa, wherein |CT_AV| represents an absolute value of an average tensile stress; and/or,

DOL_0 is 0.18t-0.25t, wherein DOL_0 represents a depth of the compression stress layer and t represents a thickness of the chemically strengthened microcrystalline glass; and/or

CS_50 is 150MPa-250MPa, wherein CS_50 refers to a compressive stress value at a depth of 50μm from a main surface of the chemically strengthened microcrystalline glass.

8. The chemically strengthened microcrystalline glass according to any one of claims 1-7, wherein in terms of an oxide molar percentage, a composition at a center of the chemically strengthened microcrystalline glass or a composition of the tensile stress layer comprises: SiO_2: 61.50%-63.40%, Al_2O_3: 2.75%-2.99%, P_2O_5: 0.91%-1.91%, ZrO_2: 4.20%-4.85%, Na_2O: 1.80%-3.20%, B_2O_3: 0-1.00%, and Li_2O: 25.32%-26.52%.

9. The chemically strengthened microcrystalline glass according to claim 8, wherein in terms of an oxide molar percentage, a composition at a center of the chemically strengthened microcrystalline glass or a composition of the tensile stress layer comprises:

a mole percentage of SiO_2 is 61.50%-63.30%; and/or,

a mole percentage of P_2O_5 is 1.20%-1.91%; and/or,

a mole percentage of Na_2O is 1.85%-3.05%; and/or,

a mole percentage of B_2O_3 is 0-0.65%; and/or,

a mole percentage of ZrO_2 is 4.20%-4.60%; and/or,

a mole percentage of Li_2O is 25.52%-26.52%.

10. The chemically strengthened microcrystalline glass according to claim 8, wherein in a composition at a center of the chemically strengthened microcrystalline glass or a composition of the tensile stress layer, a mole percentage of Na_2O [Na_2O], a mole percentage of B_2O_3 [B_2O_3] and a mole percentage of ZrO_2 [ZrO_2] satisfy a following relationship:

$Z=-1.344\times(2.65-100\times[Na_2O])^2+0.466\times100\times[B_2O_3]+1.203\times100\times[ZrO_2]$, $4.80\leq Z\leq5.35$; and/or

in the composition at the center of the chemically strengthened microcrystalline glass or the composition of the tensile stress layer, the mole percentage of Na_2O [Na_2O] and the mole percentage of B_2O_3 [B_2O_3] satisfy a following relationship:

$0.90\% \leq [Na_2O]-[B_2O_3] \leq 3.10\%$; and/or

in the composition at the center of the chemically strengthened microcrystalline glass or the composition of the tensile stress layer, the mole percentage of Na_2O [Na_2O] and a mole percentage of Li_2O [Li_2O] satisfy a following relationship:

$8.55 \leq [Li_2O]/[Na_2O] \leq 13.85$.

11. The chemically strengthened microcrystalline glass according to claim 8, wherein in a composition at a center of the chemically strengthened microcrystalline glass or a composition of the tensile stress layer, a mole percentage of Na_2O [Na_2O], a mole percentage of B_2O_3 [B_2O_3] and a mole percentage of ZrO_2 [ZrO_2] satisfy a following relationship:

$Z=-1.344\times(2.65-100\times[Na_2O])^2+0.466\times100\times[B_2O_3]+1.203\times100\times[ZrO_2]$, $5.05 \leq Z \leq 5.25$; and/or

in the composition at the center of the chemically strengthened microcrystalline glass or the composition of the tensile stress layer, the mole percentage of Na_2O [Na_2O] and the mole percentage of B_2O_3 [B_2O_3] satisfy a following relationship:

$2.00\% \leq [Na_2O]-[B_2O_3] \leq 3.00\%$; and/or

in the composition at the center of the chemically strengthened microcrystalline glass or the composition of the tensile stress layer, the mole percentage of Na_2O [Na_2O] and a mole percentage of Li_2O [Li_2O] satisfy a following relationship:

$8.60 \leq [Li_2O]/[Na_2O] \leq 11.00$.

12. The chemically strengthened microcrystalline glass according to any one of claims 1-11, wherein an average grain size of the chemically strengthened microcrystalline glass is below 40nm; and/or,

a crystallinity of the chemically strengthened microcrystalline glass is above 45%.

13. The chemically strengthened microcrystalline glass according to claim 1, wherein the chemically strengthened microcrystalline glass is transparent in a wavelength range of a visible light; and/or,

at a thickness of 0.70mm, a haze of the chemically strengthened microcrystalline glass is <0.30%; and/or,

at the thickness of 0.70mm, a b value of the chemically strengthened microcrystalline glass is <0.70, wherein the b value refers to an optical b value measured under a D65 light source.

14. The chemically strengthened microcrystalline glass according to claim 1, wherein the chemically strengthened microcrystalline glass is planar or curved; and/or, a thickness of the chemically strengthened microcrystalline glass is 0.3mm-2mm; and/or, the chemically strengthened microcrystalline glass does not contain a petalite crystalline phase.

15. An electronic device, wherein the electronic device comprises the chemically strengthened microcrystalline glass according to any one of claims 1-14.